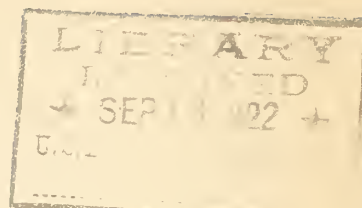


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

Bi-668
Sept. 22 1922.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY.



MOLES AND MICE IN RELATION TO FLOWER BULBS.

The Damage.-----Damage to fall-planted bulbs by small burrowing mammals is commonly reported from almost all sections where tulips, narcissi, and hyacinths, particularly, are grown. These bulbs are destroyed in the ground during the winter months or are eaten even up to the period of flowering. Careful examination of the injured beds will always disclose runways in the soil of the animal responsible for the damage. These burrows, if small, perhaps an inch in diameter, were dug by meadow mice, a type of native rodent common practically everywhere in our agricultural districts. These mice have short tails, a short nose, very small eyes and ears, and a dull, nearly uniform pelage color.

If the runways are larger and are associated with surface ridges or mounds of earth, they were made by moles. In either case the mice are largely or perhaps wholly responsible for the damage to the bulbs, as mole runways are very commonly used by rodent trespassers.

The Remedy.----- If the bulb beds are near waste ground or any situation that would shelter field mice, measures should be taken in fall to protect the bulbs. Any moles in the vicinity should be trapped and their runways poisoned to destroy the mice that infest them. In putting out the poison for this purpose use a small sharpened stick to make clean openings through the roof of the mole ridges or burrows and cover each hole after the baits have been introduced. Mouse runways, when discovered, may be poisoned in the same way, and baited traps may be used freely about all mouse harbors. If any poisoned bait is put out above ground, it should be protected in old tin cans or under shelters to which the mice only have access.

An efficient poisoned bait may be prepared as follows:

Strychnine alkaloid, powdered	1/8 ounce
Powdered saccharine	1/8 teaspoonful
Table rolled oats	3 quarts
Prepared laundry starch	1/2 teacupful

Mix the strychnine and saccharine, then beat the mixture thoroughly into the laundry starch paste. Pour this over the rolled oats in a pan or tight box and mix until every flake of the grain is dampened with the poisoned starch coating. The bait will dry quickly and is then ready for use.

C A U T I O N !

All utensils used in the preparation of poisons and all poison containers should be kept PLAINLY LABELED and OUT OF REACH of children, irresponsible persons, and live stock.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEYMOLES AND RODENTS IN RELATION TO FLOWER BULBS (PRELIMINARY)
(Washington District)

THE DAMAGE:

Damage to fall-planted bulbs by small burrowing mammals is commonly reported from almost all sections where tulips, lilies, and bulbous irises, particularly, are grown. These bulbs are destroyed in the ground during the fall and winter months, or are eaten even up to the period of flowering. Careful examination of the injured beds will always disclose, in the soil, runways of the animal responsible for the damage. These burrows, if small, perhaps an inch in diameter, were dug by meadow mice, a type of native rodent common practically everywhere in our agricultural districts.

If the runways are larger, have no open entrances at the surface, and are associated with mounds and ridges of earth, they were made by moles or pocket gophers. Mole burrows are usually open throughout the length of their long ramifications; pocket-gopher tunnels always have some of their branches packed with earth from the newer excavations. Mole runways, in all parts of the country where the animal is found, are used also by mice and other small mammals for marauding and traffic.

THE REMEDY:

If the bulb plantings are near waste ground or any situation that would shelter these small mammal pests, measures should be taken in the fall to protect the bulbs. Any moles in the vicinity should be trapped and their runways poisoned, to destroy the mice that infest them. The bait used in the poisoning may be introduced through holes made with a sharpened prod, or a plant trowel if the runway is deep, after which the openings should be neatly closed with pieces of sod or other material. When poisoned bait is put out above ground it should be placed under cover of the mouse shelters, or in old tin cans to which only the mice have access. This protects the bait from the weather and puts it out of reach of our bird friends. An efficient poisoned bait for the mice may be prepared as follows:

Dissolve 1 tablespoonful dry gloss starch in 1/2 teacupful coldwater, then add to 1/2 pint boiling water, to make a thin clear paste. Mix together dry, 1 ounce strychnine alkaloid (powdered), 1 ounce baking soda, and 1 teaspoonful saccharine. Sift into the hot starch paste and stir thoroughly to a creamy mass. Mix in 1/4 pint corn syrup and 1 tablespoonful glycerine. Pour the mixture over 16 quarts of high-grade, steam-rolled whole oats, and mix until evenly coated. Allow the bait to dry before distributing.

(over)

Pocket gophers may be taken with special traps made for the purpose, or they may be fairly easily poisoned with small pieces of sweet potato, carrot, or parsnip, over which, when freshly cut, mixed powdered strychnine and saccharine have been lightly dusted. These baits should be put into the burrows, as in the case of the mice. (Write for leaflet Bi-175a, "Poisoning Pocket Gophers," and Bi-730, "Directions for Trapping Pocket Gophers.")

C A U T I O N

All utensils used in the preparation of poisons and all poison containers, should be kept PLAINLY LABELED and OUT OF REACH of children, irresponsible persons, and livestock.

~~11111~~
~~11111~~